

## REMARKS

### Drawings

The Examiner objected to the drawings on several bases. Formal drawings are submitted herewith. Applicants believe that these formal drawings address the several objections the Examiner had to the original drawings. In the attached formal drawings, Fig. 1 appears on the first sheet as it did in the original drawings, and for that reason has been labelled a replacement sheet. The remaining drawings have been consolidated on three sheets as opposed to the originally submitted nine, and for that reason the three sheets have been labelled as new sheets. No new matter is sought to be entered by the presentation of these formal drawings.

The Examiner objected to the drawings under 37 C.F.R. §1.83(a) that they fail to show the lumen of the robot plate powder hose barbed fitting 22, the lumen of the powder hose barbed fitting 16, the lumen through seal 26, the lumen 28 of the powder delivery tube 14, the lumen of reducing section 42, the lumen of expanding section 44, and the lumens of reducing section 142 and expanding section 144. A lumen is the opening or passageway in a tube or the like. The lumen of barbed fitting 22 is illustrated in Figs. 1, 4 and 5. The lumen of barbed fitting 16 is illustrated in Figs. 1-3. The lumen through seal 26 is illustrated in Figs. 1, 6 and 7. The lumen 28 of the powder delivery tube 14 is illustrated in Fig. 1. The lumen of reducing section 42 is illustrated in Figs. 1, 8 and 9. The lumen of expanding section 44 is illustrated in Figs. 1, 8 and 9. The lumen of reducing section 142 is illustrated in Figs. 10-12. The lumen of expanding section 144 is illustrated in Figs. 10-12. These objections to the drawings under 37 C.F.R. §1.83(a) are thus overcome.

The Examiner further objected to the drawings under 37 C.F.R. §1.83(a) that they fail to show the first section as described in claim 1, the first expander section of claim 2, the first reducer section of claim 3, the lumen of the first expander section of claim 4, the lumen of the first reducer section of claim 6, the first member including a second reducer section including a lumen of claim 8, the first feature in claim 8, the second member including a second expander section including a lumen of claim 8, the second feature in claim 8, the second reducer section including a lumen of claim 9, the second expander section of claim 9, the first reducer section in claim 12, and the first expander section in claim 12. The first section recited in claim 1 is illustrated at least in Figs. 10-12. The first expander section recited in claim 2 is illustrated at least in Figs. 10 and 12. The first reducer section recited in claim 3 is illustrated at least in Figs. 10-12. The lumen of the first expander section recited in

claim 4 is illustrated at least in Figs. 10-12. The lumen of the first reducer section recited in claim 6 is illustrated at least in Figs. 10-12. The first member including a second reducer section including a lumen and a first feature and a second member including a second expander section and a second feature, the first and second features cooperating to define a space for accommodating the seal member between the second reducer section and the second expander section recited in claim 8 is illustrated at least in Figs. 1-7. The second reducer section including a lumen and a second expander section including a lumen as recited in claim 9 is illustrated at least in Figs. 1-9. The first reducer section and the first expander section as recited in claim 12 are illustrated at least in Figs. 10-12. These objections to the drawings under 37 C.F.R. §1.83(a) are thus overcome.

#### Claim Objections

The Examiner objected claims 1-18 because of informalities. The Examiner calls Applicants the attention to the terms first reducer section and first expander section in the claims 2 and 3 and second reducer section and second expander section in claim 8. The Examiner states that the terms used in claims 2, 3, and 8 do not refer to the same terms used in the specification. The Examiner objected claim 7 as it was worded same as claim 5. The Examiner objected claims 2-11 and 13-18 because it is inconsistent on how the invention is claimed.

Applicants call the Examiner's attention to page 2, line 5-page 4, line 5 of the specification, where the invention is described in *ipsisssimis verbis* as in the claims. Applicants respectfully submit that the terms used in the claim language are consistent with those used in the specification. Applicants respectfully submit the Examiner's objection is therefore overcome and request the Examiner's objection be withdrawn.

#### Claim Rejections - 35 U. S. C § 112

The Examiner rejected claims 4, 6, 8-9, 11, 16, and 17 under 35 U. S. C § 112. The Examiner indicates that there is insufficient antecedent basis for the limitation "lumen" in claims 4, 6, and 11. The Examiner further indicates that the claims 4, 6, 8-9, 11, 16, and 17 are indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner states that "[t]he word 'lumen' is not identified in the specification or shown in the drawings. It is unclear as to what the word 'lumen' is referring to throughout the indicated claims. Claims 4, 6, 8-9 and 11 have been amended to overcome this objection. Applicants respectfully submit the

Examiner's rejection under 35 U. S. C § 112 is therefore overcome and request that the Examiner's rejection be withdrawn.

#### Claim Rejections - 35 U. S. C § 102

The Examiner rejected claims 1-7 and 12-18 under 35 U. S. C. § 102.. The Examiner relied upon LeCompte U. S. Patent 5,704,825 (hereinafter LeCompte) to support this rejection.

##### LeCompte

“relates to an improved blast nozzle used in abrasive blasting and cleaning with improved performance characteristics. Such blast nozzles are used in abrasive blasting in which a high speed stream of air, in which sand or other abrasive blasting material is entrained, is directed against a surface for removing rust, scale, old paint, debris and contamination from a surface prior to cleaning, repainting or applying a similar surface coating. The improved blast nozzle of the present invention produces a larger, more easily controlled blast pattern without requiring any increase in air pressure, air volume or abrasive blasting material.”

LeCompte, col. 1, lines 7-11. The purpose of LeCompte is to achieve “a substantially square blast pattern.” *Id.* at col. 2, lines 33-34, Fig. 5. Applicants' claims 1 and 12, from which the remaining claims depend either directly or indirectly, both recite “A dispenser for dispensing pulverulent *coating material*.” Claim 1, line 1; claim 12, line 1. Emphasis Applicants'. It is neither LeCompte's goal nor does LeCompte teach or disclose to achieve a uniform distribution of the coating materials.

The present invention is for a dispensing nozzle for *applying* coating materials, not *removing* coating materials as taught by LeCompte. The dispensing nozzle of the present invention teaches dispensing coating materials more uniformly and homogenously and to achieve even film “build” on the surface being coated. The present invention teaches providing uniform and controllable film thickness of coating materials, because too thick of a coating wastes coating materials, increasing coating cost, and too thin of a coating can adversely affect coating appearance and function.

Applicants submit that one skilled in the applicable art would not have been led by LeCompte's blast nozzle that is used for removing, *inter alia*, coating materials to the dispensing nozzle in the present invention that is used for *applying* coating materials uniformly, evenly, and homogenously.

For at least the above reasons, the 35 U. S. C. § 102 rejection of claims 1-7 and 12-18 based on LeCompte is thus overcome. Accordingly, Applicants submit that claims 1-7 and 12-18 are in condition for further favorable consideration, culminating in allowance. Such action is respectfully requested.

### 35 U. S. C. § 103 Rejection

The Examiner rejected claims 8-11 under 35 U. S. C. § 103. The Examiner relied upon the combination of Hollstein U. S. Patent 6,105,886 (hereinafter Hollstein) and LeCompte to support this rejection.

The Examiner calls Applicant's attention to Hollstein's spray gun 10 including a non-rotary tube member 48, a tubular housing sleeve 14, a hose 49, and a housing body 11. Hollstein Fig. 2. The Examiner concedes that Hollstein does not teach "a first section of the conduit adjacent to the opening having a cross section transverse to the direction of the flow of the pulverulent material through the first section, the cross section being generally rectangular. However, the Examiner concludes that "it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to substitute the first reducer and expander sections having a rectangular cross-section of LeCompte for the outlet device of Hollstein at al in order to discharge an even coat of pulverulent spray from the dispenser." *Id.* at page 9 and 10.

#### I. LeCompte is non-analogous to the present invention.

The test for determining whether prior art is analogous for the purpose of determining whether the art can appropriately serve as a basis for a 35 U.S.C. §103 rejection is set forth in, for example, In re Clay, 23 USPQ 2d 1058 (Fed. Cir. 1992) and In re Oetiker, 24 USPQ 2d 1443 (Fed. Cir. 1992).

In In re Oetiker, the court reversed the Board's reasoning and held that the Board erred to make "all hooking problems are analogous." *Id.* at 1445 The Court noted that

[i]n order to rely on a reference as a basis for rejection of the applicant's invention, the reference must either be in the field of the applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned. See In re Deminski, 796 F.2d 436, 442, 230 USPQ 313, 315 (Fed. Cir. 1986). Patent examination is necessarily conducted by *hindsight*, with complete knowledge of the applicant's invention, and the courts have recognized the subjective aspects of determining whether an inventor would

reasonably be motivated to go to the field in which the examiner found the reference, in order to solve the problem confronting the inventor. We have reminded ourselves and the PTO that it is necessary to consider “the reality of the circumstances,” In re Wood, 599 F.2d 1032, 1036, 202 USPQ 171, 174 (CCPA 1979) - in other words, *common sense* - in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor.

It has not been shown that a person of ordinary skill, seeking to solve a problem of fastening a hose clamp, would reasonably be expected or motivated to look to fasteners for garments. The combination of elements from non-analogous sources, in a manner that reconstructs the applicant’s invention only with the benefit of hindsight, is insufficient to present a *prima facie* case of obviousness.

\* \* \*

We conclude that the references on which the Board relied were improperly combined. Accordingly, the Board erred in holding the claims unpatentable under section 103. The rejection of claims 1-4 and 16-21 is REVERSED.

Oetiker at 1445-46. (emphasis added).

As discussed above, LeCompte’s invention is used in abrasive blasting for removing, *inter alia*, coating materials. It is neither LeCompte’s goal, nor does LeCompte disclose or suggest to achieve a uniform distribution of the dispensing materials. The present invention is for a dispensing nozzle for *applying* coating materials, not *removing* coating materials as taught by LeCompte. The dispensing nozzle of the present invention teaches dispensing coating materials more uniformly and homogeneously to achieve even film “build” on the surface being coated. The present invention teaches providing uniform and controllable film thickness of powder coating materials.

A person having ordinary skill in the art would not reasonably have expected to solve the problem of uneven and inhomogeneous coating material dispensing by considering a reference dealing with sand blasting for “removing rust, scale, old paint, debris and contamination from a surface prior to cleaning, repainting or applying a similar surface coating.” The combination of elements from a non-analogous source, in a manner that reconstructs Applicants’ invention only with the benefit of hindsight, is insufficient to present a *prima facie* case of obviousness.

II. There is no motivation from both LeCompte and Hollstein to combine the elements from the two references.

When patentability turns on the question of

obviousness, the search for and analysis of the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or suggestion to select and combine the references relied on as evidence of obviousness. See, e.g., McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001) (“the central question is whether there is reason to combine [the] references,” a question of fact drawing on the Graham factors).

“The factual inquiry whether to combine references must be thorough and searching.” Id. It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions, and cannot be dispensed with. See, e.g., Brown & Williamson Tobacco Corp. v. Philip Morris Inc., 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed. Cir. 2000) (“a showing of a suggestion, teaching, or motivation to combine the prior art references is an ‘essential component of an obviousness holding’”) (quoting C.R. Bard, Inc. v. M3 Systems, Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998)); In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999) (“Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references.”); In re Dance, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998) (there must be some motivation, suggestion, or teaching of the desirability of making the specific combination that was made by the applicant); In re Fine, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988) (“teachings of references can be combined only if there is some suggestion or incentive to do so.”) (emphasis in original) (quoting ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984)).

The need for specificity pervades this authority. See, e.g., In re Kotzab, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) (“particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed”); In re Rouffet, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998) (“even when the level of skill in the art is high, the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination. In other words, the Board must explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious.”); In re Fritch, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992) (the examiner can satisfy the burden of showing obviousness of the combination “only by showing some objective teaching in the prior art or that knowledge generally available to one of

ordinary skill in the art would lead that individual to combine the relevant teachings of the references”).

With respect to Lee's application, neither the examiner nor the Board adequately supported the selection and combination of the Nortrup and Thunderchopper references to render obvious that which Lee described. The examiner's conclusory statements that “the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software” and that “another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial” do not adequately address the issue of motivation to combine. This factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to “[use] that which the inventor taught against its teacher.” W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983). Thus the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion.

Deferential judicial review under the Administrative Procedure Act does not relieve the agency of its obligation to develop an evidentiary basis for its findings. To the contrary, the Administrative Procedure Act reinforces this obligation. See, e.g., Motor Vehicle Manufacturers Ass'n v. State Farm Mutual Automobile Ins. Co., 463 U.S. 29, 43 (1983) (“the agency must examine the relevant data and articulate a satisfactory explanation for its action including a ‘rational connection between the facts found and the choice made.’”) (quoting Burlington Truck Lines v. United States, 371 U.S. 156, 168 (1962)); Securities & Exchange Comm'n v. Chenery Corp., 318 U.S. 80, 94 (1943) (“The orderly function of the process of review requires that the grounds upon which the administrative agency acted are clearly disclosed and adequately sustained.”).

In its decision on Lee's patent application, the Board rejected the need for “any specific hint or suggestion in a particular reference” to support the combination of the Nortrup and Thunderchopper references. Omission of a relevant factor required by precedent is both legal error and arbitrary agency action. See Motor Vehicle Manufacturers, 463 U.S. at 43 (“an agency rule would be arbitrary and capricious if the agency . . . entirely failed to consider an important aspect of the problem”); Mullins v. Department of Energy, 50 F.3d 990, 992 (Fed. Cir. 1995) (“It is well established that agencies have a duty to provide reviewing courts with a sufficient explanation for their decisions so that those decisions may be judged against the

relevant statutory standards, and that failure to provide such an explanation is grounds for striking down the action.”). As discussed in National Labor Relations Bd. v. Ashkenazy Property Mgt. Corp., 817 F.2d 74, 75 (9th Cir. 1987), an agency is “not free to refuse to follow circuit precedent.”

The foundation of the principle of judicial deference to the rulings of agency tribunals is that the tribunal has specialized knowledge and expertise, such that when reasoned findings are made, a reviewing court may confidently defer to the agency's application of its knowledge in its area of expertise. Reasoned findings are critical to the performance of agency functions and judicial reliance on agency competence. See Baltimore and Ohio R. R. Co. v. Aberdeen & Rockfish R. Co., 393 U.S. 87, 91-92 (1968) (absent reasoned findings based on substantial evidence effective review would become lost “in the haze of so-called expertise”). The “common knowledge and common sense” on which the Board relied in rejecting Lee's application are not the specialized knowledge and expertise contemplated by the Administrative Procedure Act. Conclusory statements such as those here provided do not fulfill the agency's obligation. This court explained in Zurko, 258 F.3d at 1385, 59 USPQ2d at 1697, that “deficiencies of the cited references cannot be remedied by the Board's general conclusions about what is 'basic knowledge' or 'common sense.’” The Board's findings must extend to all material facts and must be documented on the record, lest the “haze of so-called expertise” acquire insulation from accountability. “Common knowledge and common sense,” even if assumed to derive from the agency's expertise, do not substitute for authority when the law requires authority. See Allentown Mack, 522 U.S. at 376 (“Because reasoned decisionmaking demands it, and because the systemic consequences of any other approach are unacceptable, the Board must be required to apply in fact the clearly understood legal standards that it enunciates in principle . . . .”)

The case on which the Board relies for its departure from precedent, In re Bozek, 416 F.2d 1385, 163 USPQ 545 (CCPA 1969), indeed mentions “common knowledge and common sense,” the CCPA stating that the phrase was used by the Solicitor to support the Board's conclusion of obviousness based on evidence in the prior art. Bozek did not hold that common knowledge and common sense are a substitute for evidence, but only that they may be applied to analysis of the evidence. Bozek did not hold that objective analysis, proper authority, and reasoned findings can be omitted from Board decisions. Nor does Bozek, after thirty-two years of isolation, outweigh the dozens of rulings of the Federal Circuit and the Court of Customs and Patent Appeals that determination of patentability must be based on evidence. This court has remarked, in Smiths Industries Medical Systems, Inc. v. Vital



Signs, Inc., 183 F.3d 1347, 1356, 51 USPQ2d 1415, 1421 (Fed. Cir. 1999), that Bozek's reference to common knowledge "does not in and of itself make it so" absent evidence of such knowledge.

In re Lee, 61 U. S. P. Q. 2d 1430, 1433-1435, (Fed. Cir. Jan. 18, 2002).

Under Lee, in order to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See M.P.E.P. Section 2143 - Section 2143.03 for decisions pertinent to each of these criteria. M.P.E.P. § 2142.

[V]irtually all [inventions] are combinations of old elements." *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 698, 218 U.S.P.Q. 865, 870 (Fed. Cir. 1983); *see also Richdel, Inc. v. Sunspool Corp.*, 714 F.2d 1573, 1579-80, 219 U.S.P.Q. 8, 12 (Fed. Cir. 1983) ("Most, if not all, inventions are combinations and mostly of old elements."). An examiner may often find every element of a claimed invention in the prior art. If identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue. Furthermore, rejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. Such an approach would be "an illogical and inappropriate process by which to determine patentability.

In re Rouffet, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998), citing Sensonics, Inc. v. Aerosonic Corp., 81 F.3d 1566, 1570, 38 USPQ.2d 1551, 1554 (Fed. Cir. 1996).

Neither LeCompte nor Hollstein discloses or suggests the desirability of combining the elements from the two references. Examiner presented no findings, nor did the Examiner explain any reason, that a skilled artisan, without knowledge of the present invention, would have selected the references and combined them as the Examiner claimed. It appears that the only suggestion to combine the references is the present invention. It is reasonable to infer that the Examiner selected these references with the


assistance of hindsight based on Applicants' claims. Courts forbid the use of hindsight in the selection of references that comprise the case of obviousness. In re Rouffet, 149 F.3d at 1358. See In re Gorman, 933 F.2d 982, 986, 18 U.S.P.Q.2d 1885, 1888 (Fed. Cir. 1991). Lacking a motivation to combine references, the Examiner did not establish a *prima facie* case of obviousness.

Without providing any motivation to combine the references, without any finding of reasonable expectation of success, and without proving the references taught all the claim limitations, again the Examiner has not made a *prima facie* case of 35 U. S. C. § 103 obviousness.

Accordingly, Applicant submits that the 35 U. S. C. § 103 rejection of claims 8-11 is overcome. Favorable consideration, culminating in allowance of claim 8-11, is respectfully requested.

The Commissioner is hereby authorized to charge any fees which may be due to constitute this a timely response to the September 22, 2005 official action to Applicants' undersigned counsel's deposit account 10-0435 with reference to file number 3030-72221. A duplicate copy of this authorization is enclosed for that purpose.

Respectfully submitted,



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